

**Enerplus Corporation- Various Well Sites
Partial Compliance Evaluation (PCE)
On-Site Clean Air Act (CAA) Inspections**

Inspection Date: March 30 & 31, 2015

Inspection Report Date: June 11, 2015 FINAL

EPA Representatives: Alexis North
Scott Patefield

Tribal Representatives: Tom Eagle, Carlisle Wells

Company Representatives: None

Inspection Report Prepared By: Alexis North & Scott Patefield

Inspection Report Reviewed By: Cynthia Reynolds

Applicable Rules: Fort Berthold Indian Reservation (Mandan, Hidatsa and Arikara Nation), North Dakota (Fort Berthold FIP)

Overall Inspections' Findings

The EPA detected natural gas emissions using an infrared (IR) camera at the following well pads from oil/water storage tanks in violation of 40 C.F.R. § [49.4165\(b\)\(1\), \(2\) & \(3\)](#):

- FREDERICKS 6-31H, FREDERICKS 5-11H (MOV_2746.mp4)
- MORRISON 149-93-10AH, FOX RIDGE 10-21H, RED ROCKS 149-93-10AH (MOV_2753.mp4)
- BULLHEAD 148-93-15D-16H TF, CATFISH 148-93-15D-16H, PUMPKIN 148-93-14C-13H TF, TOBACCO 148-93-14C-13H (MOV_2767.mp4, MOV_2768.mp4)

General Source Information

Inspectors scanned the following Enerplus Corporation (Enerplus) well sites' crude and/or water storage tanks and flares from the well site's entrance and/or adjacent road for any detectable emissions using an IR camera. Specifically, inspectors scanned storage tanks for natural gas emissions per 40 C.F.R. § 49.4165(b)(1), (2) & (3) and utility flares per 40 C.F.R. § 49.4165(c).

The EPA evaluated the following Enerplus well sites on the Fort Berthold Indian Reservation using an IR camera on March 30 & 31, 2015. The well information located in the tables below is from the North Dakota Industrial Commission (NDIC) well index located online at <https://www.dmr.nd.gov/oilgas/>.

Table 1: List of Facilities Inspected March 30, 2015

In/Out	# Tanks	IR emissions tanks?	Video ID	IR emissions flare?	NDIC #	CurrentWellName	Lat	Long
10:54	6	Yes	MOV_2746.mp4	No	17634	FREDERICKS 6-31H	47.67317	- 102.448
11:12					17299	FREDERICKS 5-11H	47.67351	- 102.438
3:12	12	Yes	MOV_2753.mp4	No	20977	MORRISON 149-93-10AH	47.74539	- 102.567
3:20					20499	FOX RIDGE 10-21H	47.74539	- 102.567
					20978	RED ROCKS 149-93-10AH	47.74539	- 102.567

Table 2: List of Facilities Inspected March 31, 2015

In/Out	# Tanks	IR emissions tanks?	Video ID	IR emissions flare?	NDIC #	CurrentWellName	Lat	Long
12:48	16	Yes	MOV_2767.mp4, MOV_2768.mp4	No	23166	BULLHEAD 148-93-15D-16H TF	47.63598	- 102.501
12:56					24763	CATFISH 148-93-15D-16H	47.6358	- 102.501
					24764	PUMPKIN 148-93-14C-13H TF	47.63562	- 102.501
					24765	TOBACCO 148-93-14C-13H	47.63544	-102.5
1:31	6	No		No	17634	FREDERICKS 6-31H	47.67317	- 102.448
1:33					17299	FREDERICKS 5-11H	47.67351	- 102.438

Fort Berthold FIP Applicability

Based on drilling information reported to the NDIC well index by Enerplus, the facilities listed in Tables 1 and 2 were completed after the August 12, 2007 applicability date (per 40 C.F.R. § 49.4161) and are producing from the Bakken Pool (per 40 C.F.R. § 49.4163(a)(1)) and are thus subject to the Fort Berthold FIP.

Closed Vent System Equipment Requirements [§49.4165(b)]

Per 49.4165(b)(1), “Each closed-vent system must route all produced natural gas and natural gas emissions from production and storage operations to the natural gas sales pipeline or the control devices...”. The EPA, using an IR camera, noted and recorded natural gas emissions from production and storage tanks at 3 of the 4 well pads evaluated. Attachment A includes an IR log of each location and IR video details.

APPENDIX A: IR & PHOTO LOGS

IR LOG

COMPANY/ OPERATOR	SITE	FILE DATE	ACTU AL DATE	FRAME #	FORM AT	PHOTO GRAPH ER	DISTAN CE (yds) Camera to Leak	DESCRIPT ION
ENERPLUS RESOURCES USA CORPORATION	FREDERICKS 6-31H	12/31/1 999	3/30/20 15	MOV_2 746	mp4	Spatefiel d	NR	Tank video
ENERPLUS RESOURCES USA CORPORATION	MORRISON 149-93- 10AH	1/1/200 0	3/30/20 15	MOV_2 753	mp4	Spatefiel d	97	Tank video
ENERPLUS RESOURCES USA CORPORATION	BULLHEAD 148-93- 15D-16H TF	4/1/201 5	3/31/20 15	MOV_2 767	mp4	Spatefiel d	98	Tank video
ENERPLUS RESOURCES USA CORPORATION	CATFISH 148-93- 15D-16H	4/1/201 5	3/31/20 15	MOV_2 768	mp4	Spatefiel d	98	Tank video

PHOTO LOG

File		Date	Time	Photographer	Comments
20150330_	105245	3/30/2015	10:52	A.North	Enerplus signage
20150330_	105252	3/30/2015	10:52	A.North	Enerplus signage
20150330_	110023	3/30/2015	11:00	A.North	Enerplus signage
20150330_	110550	3/30/2015	11:05	A.North	Enerplus signage
20150330_	151103	3/30/2015	3:11	A.North	Enerplus signage
20150330_	151119	3/30/2015	3:11	A.North	Enerplus site
20150330_	151120	3/30/2015	3:11	A.North	Enerplus site
RIMG	0034	4/1/2015 (Actually 3/31/15)	12:52	A.North	Enerplus signage
RIMG	0035	4/1/2015 (Actually 3/31/15)	1:31	A.North	Enerplus site
RIMG	0036	4/1/2015 (Actually 3/31/15)	1:33	A.North	Enerplus site
RIMG	0037	4/1/2015 (Actually 3/31/15)	1:54	A.North	Enerplus site
RIMG	0038	4/1/2015 (Actually 3/31/15)	1:54	A.North	Enerplus site